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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,975	12/29/2000	Charles Elkins	V199-1933	9062

7590 05/25/2005  
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EXAMINER

PRONE, JASON D

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

6

<b>Office Action Summary</b>	<b>Application No.</b> 09/751,975	<b>Applicant(s)</b> ELKINS ET AL.	
	<b>Examiner</b> Jason Prone	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- 1. ☐ Certified copies of the priority documents have been received.
  - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. In view of the appeal brief filed on 25 June 2004, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6 and 8-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. In regards to claims 6 and 9, the phrase "a transport element for automatically positioning said at least one splitting element along one of the pre-scored planes" is unclear. From the specification and the Figures, it is clear that the only structure that can be positioned by the transport element is the work piece. It is unclear how the

transport element positions the splitting element when the splitting element is fixed. The pre-scored planes are positioned relative to the splitting elements.

5. In regards to claim 16, the phrase "positioning a splitting element" is unclear.

See paragraph 4 above.

6. In regards to claim 20, the phrase "surface loading to the multiple board array by way of a shield element attached to the multiple board array" is unclear. Claim 9, from which claim 20 depends, discloses that the multiple board array incorporates pre-scored plane that the boards are split. It is unclear how the boards can be split when a single shield is attached to the multiple board arrays.

7. In regards to claim 21, see paragraph 6 above.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 5-10, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Happ (4,646,954). See page of this Office action for examiner added reference numerals

Happ discloses the same invention including an apparatus for separating a work piece (12) comprising at least one splitting element (70) positioned along at least one pre-scored plane (71), at least one torque inducing element (69) using edge loading to mechanically force the work piece onto the splitting element thereby breaking the work

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piece along the pre-scored plane (see Figs. 4 and 5), a stabilizing element exerting a load on the work piece (45), the splitting element is block shaped (70), a transport element for automatically positioning the splitting element along one of the pre-scored planes (90), the transport element includes a plurality of wheels (92), and the torque inducing element is a pneumatic lever (43).

10. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Semmer (787,122).

Semmer discloses an apparatus for separating a work piece (1) comprising at least one splitting element (6) positioned along at least one pre-scored plane (1), at least one torque inducing element (3) using edge loading to mechanically force the work piece onto the splitting element thereby breaking the work piece along the pre-scored plane (see Fig. 2), and the splitting element is wedge shaped (6).

11. Claims 16 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Sutton (4,648,298).

Sutton discloses the same invention including separating individual circuit boards from a multiple array with pre-scored planes (32), positioning a splitting element along one of the pre-scored planes (74), inducing torque on the multiple board array such that the multiple board array is force onto the splitting element and breaks along the pre-scored plane (26), and repeating the positioning and inducing on each pre-scored plane (see Fig. 3).

***Claim Rejections - 35 USC § 103***

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12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Happ in view of Deshet (4,856,399). Happ discloses the invention including the stabilizing element comprises a plate element (45) but fails to disclose a plurality of spring elements. Deshet teaches a stabilizing element with a plurality of spring elements (see Fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Happ with a stabilizing element including spring elements, as taught by Deshet, to provide an alternate means of pushing the plate element against the work piece.

14. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Happ in view of Chakrabarti et al. (6,247,625). Happ discloses the invention but fails to disclose the splitting element is wedge shaped. Chakrabarti et al. teaches a wedge shaped splitting element (see Fig. 3). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Happ with a wedge shaped splitting element, as taught by Chakrabarti et al., to provide a more efficient means of splitting the work piece along its pre-scored line.

15. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton in view of Happ. Sutton discloses the invention but fails to disclose transporting the work piece using wheels and loading the surface to reduce board flex.

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Happ teaches that it is old and well know in the art of separating to transport the work piece using wheels (92) and load the surface to reduce board flex (45). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided Sutton with wheels and loading, as taught by Happ, to provide a more efficient means of separating the individual circuit boards.

16. It is to be noted that claims 20 and 21 have not been rejected over prior art. It may or may not be readable over the prior art but cannot be determined at this time in view of the issues under 35 USC § 112.

### ***Response to Arguments***

17. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection. Applicant does not positively claim the combination of the apparatus and the work piece, therefore, any apparatus disclosing the structure of the claimed apparatus and capable of performing the intended use can rejected the claims.

### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ferraino.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Prone whose telephone number is 571-272-4513. The examiner can normally be reached on 7:30-5:00, Mon - (every other) Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JP  
May 20, 2005



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